

3.0 El Salvador

CATIE	Centro Agronómico Tropical de Investigación y Enseñanza (Spain) (Tropical Agriculture Research and Higher Education Centre)
CCAD	Comisión Centroamericana de Ambiente y Desarrollo (Central American Commission for Environment and Development)
CIA	U.S. Central Intelligence Agency
CIAT	International Center for Tropical Agriculture
CIFOR	Center for International Forestry Research
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
EU	European Union
FUNDE	Fundación Nacional para el Desarrollo (National Foundation for Development)
GDP	Gross Domestic Product
GEF	Global Environment Facility
IADB	Inter-American Development Bank
INIA	Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (National Institute for Research and Technology in Agriculture and Food) (Spain)
MARN	Ministerio de Medio Ambiente y los Recursos Naturales (Ministry for Environment and Natural Resources)
RIOCC	Red Iberoamericana de Oficinas de Cambio Climático (Ibero-American Network of Climate Change Offices)
SICA	Sistema de la Integración Centroamericana Central (American Integration System)
SIECA	Sistema de Integración Económica Centroamericana (Central American Economic Integration System)
UNFCCC	United Nations Framework Convention on Climate Change
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
USDS	United States Department of State



Lying along the Pacific Ocean and bordered by Guatemala and Honduras, the relatively small country of El Salvador⁷⁴ is home to about six million people.⁷⁵ Geographically, the country is divided into three distinct regions: the southern coastal belt, the central valley and plateaus, and the northern mountains. Since its civil war ended in 1992, El Salvador's economy has grown steadily, with per capita income reaching approximately US\$7,300 in 2010 (CIA, 2011). The poverty rate has declined from 66 per cent in 1991 to 37.8 per cent in 2009 (USDS, 2011). While agriculture remains a significant portion of El Salvador's economy (generating 11 per cent of Gross Domestic Product (GDP) in 2010), manufacturing (particularly textiles and apparel) and the services sector now generate 23 per cent and 58 per cent of GDP respectively (CIA, 2011). Remittances are also an important source of income (USDS, 2011).

A. Adaptation Needs and Priorities

El Salvador has a relatively homogeneous climate. Nevertheless, climate hazards exist, and include droughts (which are noted to be increasing in length), floods and hurricanes (MARN, 2000). National temperatures have been increasing by approximately 0.35°C per decade; climate models project that temperatures will increase by 2.5° to 3.7°C by 2100. Projections are much less certain with regards to rainfall; the country has experienced a statistically insignificant reduction in rainfall in the past few decades, and projections range from declines of 36.6 per cent to increases of 11.1 per cent by the end of the century, according to the Ministry for Environment and Natural Resources (MARN) (MARN, 2000). Finally, the country's coastal zones are expected to be affected by rising sea levels.

Agriculture, water, coasts and forests have been identified as priority areas for adaptation in El Salvador. These areas have been identified through a series of key national documents. In the country's first (and so far only) National Communication to the United Nations Framework Convention on Climate Change (UNFCCC), released in 2000, the vulnerability of the country's coasts and agricultural sector were assessed (MARN, 2000). Guidelines for a national adaptation strategy were developed following the release of the First National Communication, and focused on coasts, agriculture (particularly staple foods and coffee) and forests. More recently, El Salvador's "Five-Year Development Plan" highlights agriculture, water management and ecosystems in the context of climate change adaptation (El Salvador, 2010). The Plan calls for the development of a national climate change policy, which is now forthcoming.

Beyond government documentation, a 2007 report from the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF) studied the vulnerability and adaptation needs of the rural population in the central coastal plains. More specific research on drought has included an analysis of national drought policies (Romano, 2003) and a "Policy and Action Plan on Living with Droughts in El Salvador" (FUNDE, 2003); both highlight the importance of droughts for El Salvador, particularly its

⁷⁴ The total area of El Salvador is 20,742 square kilometers (USDS, 2011).

⁷⁵ Estimate as of July 2011 (CIA, 2011).



agriculture sector. Priority areas for adaptation action are currently being reviewed as the government develops its national climate change policy and finalizes its Second National Communication.

No list of prioritized adaptation action exists in El Salvador. Nevertheless, some key actions have been identified, particularly for the agricultural sector, including: the generation and cultivation of new crop varieties; improved water supply and irrigation; soil plant coverage; early warning systems; harvest forecasts; food surveillance systems; farming investment; insurance schemes; research and development; economic policy measures to stimulate grain production; more sustainable agricultural practices; farm zoning programs; and institutions that promote human development and food security (MARN, 2000). No measures are suggested for coastal areas. UNDP and GEF (2007) also identify a set of adaptation measures related to rural livelihoods, with a focus on agriculture.

B. National Level Policies and Strategic Documents

El Salvador is a signatory to the UNFCCC, with the Ministry for Environment and Natural Resources serving as the focal point for the process. The Ministry produced its First National Communication in 2000, and planned to publish its second in 2010, though it has yet to be released.

Climate change and adaptation are referred to in the “Environment and Risk Reduction Policy”⁷⁶ section of El Salvador’s recent Five-Year Development Plan (El Salvador, 2010). The plan highlights the links between adaptation and ecosystems, water management and agriculture, and calls for the development of a national climate change policy to mainstream climate change into sectoral policies on health, agriculture, energy, transport, infrastructure, water management and waste.

El Salvador is a member of the Central American Integration System (SICA), the institutional framework for the integration of Central American states, and of the Central American Commission for Environment and Development (CCAD), a committee which brings together the environmental ministries of the SICA member states. Under the auspices of SICA and CCAD, a regional climate change strategy has recently been developed (CCAD and SICA, 2010). The strategy summarizes climate information and sectoral vulnerabilities, and proposes six strategic areas for action, including “Vulnerability and adaptation to climate variability and change, and risk management.” Under this theme, nine strategic objectives (with over 150 measures) are listed: disaster risk reduction, agriculture and food security, forest ecosystems and biodiversity, water, health, coastal-marine systems, tourism, indigenous people and public

⁷⁶ Environment and Risk Reduction Policy is one of five of the sectoral and macroeconomic policies in the plan.

infrastructure. The strategy’s other focal areas are: mitigation; capacity building; education, awareness raising, communication and participation; technology transfer; and international negotiations and management.

Table 1: Key Government Policies and Reports reflecting Adaptation Needs, Priorities and Planned Actions

Name of Policy Action	Government Division Responsible	Status	Sector(s) of Focus	Summary description
1. First National Communication to the UNFCCC	Ministry for Environment and Natural Resources	Released in 2000	Multi-sectoral	First report to UNFCCC. On adaptation, it presents some available results of assessments on coastal zones and agriculture. It also discusses some adaptation options for agriculture.
2. Five-year Development Plan 2010-2014	Government of El Salvador	Released in November 2010	Multi-sectoral	Presents the vision and priorities of the government elected in 2009 for its entire term. Climate change, including adaptation, is mentioned under the section “Environment and risk Reduction Policy,” which is one of five of the country’s sectoral and macroeconomic policies. The links between adaptation and ecosystems, water management and agriculture are highlighted. The document also calls for the elaboration of a national climate change policy that will mainstream climate change into sectoral policies on health, agriculture, energy, transport, infrastructure, water management and waste.
3. Second National Communication to the United Framework Convention on Climate Change	Ministry for Environment and Natural Resources	To be published soon		Second report to UNFCCC, initially scheduled to be finalized by late 2010.
4. National Climate Change Policy	Ministry for Environment and Natural Resources	Announced in current five-year development plan	Multi-sectoral	This policy was announced in the current five-year national development plan, which calls for the mainstreaming of climate change mitigation and adaptation into key sectors.

C. Current Adaptation Action

El Salvador has a moderate amount of adaptation action currently underway, which mostly focuses on regional capacity building and research programs on climate change adaptation. Agriculture, water and coastal areas, identified as key areas for adaptation, are reflected in current adaptation activities. However, many adaptation needs remain unaddressed, such as in the areas of human health, gender and ecosystem conservation. One project focused on providing safe drinking water in the region of Zacatecoluca involves the

implementation of adaptation concrete measures. Outside of this project, the majority of adaptation activity in El Salvador involves capacity building, research and policy formation and integration.

Table 2: Current Adaptation Action in El Salvador

Name	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
National Actions							
1. Healthy Wells and Latrines Keep Water Drinkable for Vulnerable Communities ⁷⁷	To provide safe drinking water and increase community resilience to extreme climate events in 14 vulnerable coastal communities of Zacatecoluca, El Salvador. The project targets communities that are among the most vulnerable to the impacts of climate change.	World Bank <i>Budget:</i> US\$199,000	Oxfam, PRO-VIDA	Community-based adaptation	2009–2011	Freshwater supply	Zacatecoluca
Participation in Regional and Global Actions							
2. Preparedness for Climate Change ⁷⁸	The aim of this program was for the Red Cross and Red Crescent National Societies in countries particularly vulnerable to climate change to gain a better understanding of climate change and its impacts to identify country-specific adaptation measures in line with risks. Activities could include organizing a workshop on risks, assessment of risks through preparation of a background document, capacity building programs, and developing climate change resilient plans.	Red Cross/Red Crescent Climate Centre	National Red Cross/Red Crescent Societies	Capacity building; Policy formation and integration	Phase 1: 2006–2009 Phase 2: ongoing	Disaster risk management	<i>Global:</i> 39 countries <i>In Phase 1:</i> Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua
		<i>In El Salvador:</i> All four steps of the project have been completed.					
3. Integrating Climate Change Risks and Opportunities into National Development Processes and United	The purpose of the project was to develop the capacity of UN staff and Government stakeholders to integrate risks and opportunities of climate change in national	Spain <i>Budget:</i> US\$1.2 million	UNDP	Policy formation and integration	2008–2010 (closed)	Government	<i>Global:</i> Cape Verde, Colombia, El Salvador,

⁷⁷ World Bank, <http://wbi.worldbank.org/developmentmarketplace/idea/healthy-wells-and-latrines-keep-water-drinkable-vulnerable-communities>

⁷⁸ IFRC, <http://www.climatecentre.org/site/preparedness-for-climate-change-programme>

Name	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
Nations Country Programming ⁷⁹	programming and development policies, such as their United Nations Development Assistance Framework, sectoral programs, and development plans.						Malawi and Nicaragua
		<i>In El Salvador:</i> The project involved the development of a climate profile, institutional mapping, as well as an evaluation of the United Nations Development Assistance Framework, a Development Fund as well as of the Inter-sectoral Programme on Food Security.					
4.	Climate Change Vulnerability Evaluation of Coastal and Marine Areas ⁸⁰	Spain	ECLAC, University of Cantabria, national counterparts	Capacity building; Assessment; Knowledge communication	2009–2011	Coastal zone management	Most RIOCC countries, ⁸² including all in Central America
		<i>El Salvador:</i> Further information required.					
5.	Mitigation and Adaptation to Climate Change in Sustainable Forest Management in Ibero-America ⁸³	Spain	INIA, CIFOR, CATIE, Polytechnical University of Madrid (UPM)	Capacity building; Research; Knowledge communication	2009–2011	Forestry	RIOCC countries

⁷⁹ ALM, <http://www.adaptationlearning.net/project/integrating-climate-change-risks-and-opportunities-national-development-processes-and-unite-2> and UNDP, http://www.undp.org/climatechange/integrating_cc_risks.shtml

⁸⁰ RIOCC, http://www.lariocc.net/riocc_principal/es/proyectos_iniciativas/proy_marc_piacc.htm

⁸¹ See ECLAC, <http://www.eclac.org/mexico/cambioclimatico/index.html>

⁸² The 21 member countries of RIOCC are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Portugal, Spain, Uruguay and Venezuela. Paraguay and Uruguay are not involved in this initiative.

⁸³ Proyecto MIA, <http://www.proyectomia.com/>

Name	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
	adaptation and mitigation to climate change. This includes strengthening specific research activities, developing and disseminating methodologies and case studies, strengthening human resources and fostering the representation of the forest sector in the regional and international dialogue.			n			
<i>El Salvador:</i> Further information required.							
6.	Climate Policy 2012: Extension of the global project “Capacity Development for Policy Makers to Address Climate Change” ⁸⁴	Spain, UNDP <i>Budget:</i> US\$3.6 million	UNDP	Capacity building; Policy formation and integration	2009–2011	Government	<i>LAC Region:</i> Including Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama
<i>In El Salvador:</i> Further information required							
7.	Coffee Under Pressure: Climate change and adaptation in Mesoamerica ⁸⁵	Green Mountain Coffee Roasters	CIAT	Assessment	2009–2014	Agriculture	<i>Regional:</i> Costa Rica, El Salvador, Guatemala, Mexico, Nicaragua
<i>In El Salvador:</i> Analysis of climate change impacts on suitable locations for coffee production; identification of adaptation options.							

⁸⁴ UNDP, http://www.undpcc.org/content/act_latam-en.aspx and http://www.undp.org/climatechange/docs/EEG_Flyer_EN.pdf

⁸⁵ CIAT, <http://dapa.ciat.cgiar.org/cup-coffee-under-pressure-adaptacion-del-cafe-al-cambio-climatico-en-centroamerica>

Name	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
8. The Economics of Climate Change in Central America - Phase II ⁸⁶	In the second phase of this project an economic evaluation of the impacts of climate change in central America will be undertaken. The aims of the project are to foster a dialogue on different national actions and policy options in order that Central America can meet the climate change challenge. In addition, this project includes a component focused on the impact of climate change in coastal areas– C3A (Cambio Climatico en las Coastas de America Latina y Caribe).	IADB, UK, Denmark, Spain, EU, Germany	ECLAC, CCAD, SIECA	Policy formation and integration; Knowledge communication	2008–2010	Government; Coastal zone management	<i>Regional:</i> Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama
<i>In El Salvador:</i> A crop impact study for agriculture has been undertaken and published.							
9. Peace Corps Renewable Energy and Climate Change Initiative ⁸⁷	Across the Americas the Peace Corps will, among other things, increase municipal, school and communities' awareness and knowledge of climate change (including adaptation) and support community-led projects, including on adaptation.	United States Department of State (USDS)	U.S. Peace Corps, USDS	Community-based adaptation; Knowledge communication	Ongoing	Energy	<i>LAC Region:</i> Costa Rica, Dominican Republic, El Salvador, Guatemala, Guyana, Honduras, Nicaragua, Panama, Paraguay, Peru, Suriname
<i>In El Salvador:</i> Further information required							
10. Integrating Climate Change Adaptation into National Development Processes in Latin America and the	Build climate resilience of vulnerable human and ecological systems in the region by integrating adaptation options into national planning processes and building the	Spain <i>Budget:</i> US\$4,375,233	UNEP	Capacity building; Policy formation and	2010–2013	Government; Agriculture; Freshwater supply	<i>LAC Region:</i> Phase 1: 19 RIOCC countries ⁸⁸

⁸⁶ ECLAC, <http://www.eclac.org/mexico/cambioclimatico/index.html>

⁸⁷ ECPA, <http://www.ecpamericas.org/initiatives/default.aspx?id=35>

Name	Objectives	Funder(s)	Implementing Agency(s)	Type of project	Duration	Priority Sector(s)	Geographic focus (if any)
Caribbean	associated capacity of key regional and national institutions. The project will: undertake impact and vulnerability assessments; identify good practices and gaps in integrating adaptation into policy and plans; and support adaptation planning and its integration into national development processes. It will focus on the most vulnerable sectors and ecosystems, especially water and agriculture.			integration			Phase 2: 3–5 countries (Dominican Republic 1st country selected)
<i>In El Salvador: Further information required</i>							

D. Proposed Adaptation Action

Plans are in place to expand adaptation programming in El Salvador. Action has been proposed in the areas of sustainable natural resources management, food security and coastal zone management, to be funded by the United States Agency for International Development (USAID), as well as significant planned investments in strengthening infrastructure resilience in San Salvador. The Inter-American Development Bank (IADB) is also preparing a program to support structural reform in the area of climate change and energy, although further details on the program have not yet been released.

Table 3: Proposed Adaptation Actions in El Salvador

Name	Objectives	Type of project	Priority Sector(s)	Geographic focus (if any)
1. Sustainable Management of Natural Resources	Working with the Ministry of Environment, USAID will work to improve sustainable management of natural resources in protected areas, and the biological corridors connecting these areas, and along the Salvadoran coastline. As a key component of this effort, USAID will invest \$1 million in biodiversity activities in El Salvador that support adaptation to coastal and marine threats, promote sustainable land use, and engage communities that are affected by flooding and deforestation to	Capacity building	Biodiversity; Coastal zone management	Coasts, El Salvador
Notes: From USAID fast start finance notes.				

⁸⁸ The 19 RIOCC countries are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.



Name	Objectives	Type of project	Priority Sector(s)	Geographic focus (if any)
	help them address these challenges and make them more resilient to climate change.			
2. Food Security Program	USAID will support food security programs that focus on ways to protect areas of agricultural production likely to be impacted by climate change. The program will work to reduce disaster risks and vulnerability to climatic shocks in Central America by improving information, such as Earth observation data. USAID will help build the capacity for government and community organizations to utilize early warning systems to prepare and plan for disasters.	Capacity building; Knowledge communication	Agriculture; Disaster risk management	Central America
		Notes: From USAID Fast start finance notes; US\$300,000 for the whole of Central America.		
3. Coastal zone adaptation	USAID will invest an additional \$1 million in adaptation projects in the coastal zones of Central America.	Capacity building	Coastal zone management	Central America
		Notes: USAID program for Central America; budget of US\$1 million for the whole of Central America.		
4. Support Structural Reform in Climate Change and Energy		Policy formation and integration	Multi-sectoral	El Salvador
		Notes: Under preparation by IADB.		
5. Promoting Climate Change Resilient Infrastructure Development in San Salvador Metropolitan Area ⁸⁹		Field implementation		San Salvador Metropolitan Area
		Notes: Endorsed by the Adaptation Fund Board December 2010. <i>Planned implementing agency:</i> UNDP <i>Proposed budget:</i> US\$5,425,000		

E. Assessment

Overall, El Salvador has made progress in the area of adaptation, particularly in terms of research, capacities and political awareness. Agriculture, water, coasts and, to a lesser extent, forests and ecosystems are acknowledged as the key sectors for adaptation in El Salvador, and climate change is recognized as an important issue in the country's development. At the policy level, it is expected that the soon-to-be-released Second National Communication and national climate change policy will further specify areas and actions that should be prioritized for adaptation. At the implementation level, current adaptation activities largely take place as part of regional or

⁸⁹ Adaptation Fund, http://www.adaptation-fund.org/endorsed_concepts



global projects and focus on capacity building and research. These projects are addressing needs in the priority sectors of agriculture, water and coasts. Among identified future adaptation actions, the focus is on food security, biodiversity and policy reform.

References:

- Central Intelligence Agency [CIA] (2011). El Salvador. *The World Factbook*. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/es.html>. Last updated 25 April 2011.
- Comisión Centroamericana de Ambiente y Desarrollo [CCAD] and Sistema de la Integración Centroamericana [SICA] (2010). *Estrategia Regional de Cambio Climático. Documento Ejecutivo*.
- El Salvador (2010). *Plan Quinquenal de Desarrollo 2010–2014*.
- Fundación Nacional para el Desarrollo [FUNDE] (2003). *Política y Plan de Acción de Convivencia con la Sequía en El Salvador*.
- Gavidia Medina (2001). *Líneas Prioritarias de Acción para la Definición y Ejecución de una Estrategia de Adaptación al Cambio Climático en El Salvador*.
- Ministerio de Medio Ambiente y los Recursos Naturales [MARN] (2000). *First National Communication of the Republic of El Salvador*. Retrieved from http://unfccc.int/essential_background/library/items/3599.php?such=j&symbol=SLV/COM/1%20B#beg
- Romano, L. (2003). *Evaluación de las Políticas para Enfrentar la Sequía en El Salvador dentro del Marco del Desarrollo y la Transferencia de Tecnologías de Adaptación ante la Variabilidad y el Cambio Global del Clima*.
- United Nations Development Programme [UNDP] and Global Environment Facility [GEF] (2007). *Vulnerabilidad y adaptación al cambio climático de los pobladores rurales de la planicie costera central de El Salvador*.
- United States Department for State [USDS] (2011). *Background Note: El Salvador*. Last updated 30 March 2011. Retrieved from <http://www.state.gov/r/pa/ei/bgn/2033.htm>.